

USE OF SPRAY COATINGS TO ACHIEVE NON-UNIFORM SEAL
CLEARANCES IN TURBOMACHINERY

ABSTRACT OF THE DISCLOSURE

[0019] The invention provides spray coatings to achieve circumferentially non-uniform seal clearances in turbomachines. In steam and gas turbines it is desirable to assemble the machines with elliptical seal clearances to compensate for expected casing distortion, rotordynamics or phenomena that cause circumferentially non-uniform rotor-stator rubs. The claimed invention allows the casing hardware to be fabricated round, and a spray coating is applied to the radially inner surface such that the coating thickness varies circumferentially, providing the desired non-uniform rotor-stator clearance during assembly.